



Water Technology Caucus Meeting

MEETING SUMMARY

CALIFORNIA WATER PLAN: UPDATE 2013

WATER TECHNOLOGY CAUCUS MEETING OCTOBER 14, 2011 10:00 A.M – 1:00 P.M. CENTER FOR COLLABORATIVE POLICY 815 S STREET, SACRAMENTO, CA

Meeting Purpose:

The California Water Plan (CWP) Water Technology Caucus is a statewide topic-based workgroup designed to support development of CWP Update 2013 through in-depth discussions and deliberations of innovation, technology, applied research and development topics and issues. This was the inaugural meeting of the caucus, and was meant to introduce new members to the CWP Update process. The formation of this Caucus was also intended to find collaborative opportunities with existing efforts such as the California Council on Science and Technology (CCST). Meeting materials can be found here:

<http://www.waterplan.water.ca.gov/materials/index.cfm?subject=oct1411>

Meeting Goals:

- Affirm scope of Water Plan Technology Workplan
- Finalize Water Technology Caucus Charge & Charter
- Begin work on inventory of water technology institutions & initiatives

Attendance: (See Attached)

Action Items:

- Staff to establish a LinkedIn (<http://www.linkedin.com/>) site to serve as a conduit for this meetings' work to continue on the standard input screen for the inventory of water technology institutions & initiatives. Interested members of the Water Technology Caucus should establish accounts on Linked In if they are interested in working in this space. However, no personal information other than a name is necessary on the created profile.
- Susan Hackworth, Executive Director of the California Council on Science and Technology, to provide the staff with an initial list of known research efforts, initiatives, and organizations gathered during the writing of the "Innovate 2 Innovation" report.
- Staff to post mind – maps developed during this meeting to the Linked In Water Technology Caucus website.
- "Visioning" to be added to the Water Technology Caucus workplan as an activity.

Announcements:

- October 26-27 2011, the CWP will hold a two day plenary session in Sacramento. RSVP to Nancy Van Buren at nancyv@water.ca.gov. The Water Plan Plenary is open to the public at no cost except a minimal charge for the working lunches. All Water Plan Advisory Group



Water Technology Caucus Meeting

members and their organizations and agencies are encouraged to attend. Water Technology Caucus members are encouraged to attend.

Welcome and Introductions:

Lisa Beutler (Executive Facilitator for the California Water Plan) and Kamyar Guivetchi (Manager, DWR Division of Statewide Integrated Water Management) began the meeting with opening remarks, an agenda review, and ground rules. Introductions were done for all meeting participants, including those attending through the webinar. Karl Longley (CSU Fresno), David Zoldoske (CSU Fresno, Water Cluster), and Bob Wilkinson (UC Santa Barbara) were introduced as the Co-leads of the Water Technology Caucus.

Kamyar thanked all meeting participants for their time and willingness to attend, and noted that official membership of the Caucus will be established following this meeting.

Review of Water Technology in the Water Plan:

Kamyar gave a PowerPoint presentation to the group recapping the CWP Update 2009, and current progress on the update 2013 Update of the Water Plan. He provided an overview of the broader CWP effort and described how the Water Technology Caucus's work could be integrated into the various foundational and new Water Plan components. Update 2013 builds on the work of Update 2009, including the existing strategic plan framework and on the extensive coordination and collaboration with multiple groups and interests. Foundational components of Update 2013 represent key features of the Water Plan, from Update 2009 and before. These include the following:

- Strategic Plan: that informed Prop 84 language and IRWM financial assistance criteria. A section on Water related Technology will be published in the Update 2013 strategic plan.
- Water portfolios: depict the historical water use and balance against supply for the years 1998 – 2009. This information shows the range of regional variability.
- Regional Reports: describe the regional resource management objectives, as well as funding proposals and priorities.
- Future Scenarios: outlining three scenarios to provide both qualitative and quantitative assessment of Resource Management Strategies for different futures
- Resource Management Strategies (RMS's): describe the range of choices for meeting resource management objectives. For each strategy, an estimate of benefits and magnitude of cost can inform the estimate of statewide Integrated Water Management (IWM) costs through 2050.

The theme of the CWP is integrated Water Management and Sustainability. A handout was distributed outlining the Water Plan Update 2009's 27 RMS's. These 27 RMS's fall under the following headings:

- Reduce Water Demand
- Improve Operational Efficiency & Transfers
- Increase Water Supply



Water Technology Caucus Meeting

- Improve Flood Management
- Improve Water Quality
- Practice Resource Stewardship
- Other

These RMS's provide key areas to help guide and organize the work of the Water Technology Caucus.

Outreach venues for Update 2013 will continue to support coordination at different levels, including:

- State Agency Steering Committee (28 agencies)
- Federal Agency Network (Virtual)
- Public Advisory Committee
- Tribal Advisory Committee, with 40 Tribal communities who have identified participants
- Topic Caucuses
- Regional Forums
- Statewide Water Analysis Network, providing technical input
- Annual Plenary Meetings

The presentation concluded with directions on web related resources such as the Water Plan eNews publication and CWP website, (<http://www.waterplan.water.ca.gov/index.cfm>). The PowerPoint was followed by a question and answer session.

Q: On the schedule, I see a draft assumptions report due, is the Water Technology Caucus assigned a deliverable for this?

A: No, probably not. We are looking at the Water Technology Caucus producing its first deliverable for the 2013 Public Review Draft.

Q: How do you envision the Water Technology Caucus interacting with other topic-based caucuses?

A: Multiple ways. The October 26th and 27th Plenary session is meant to involve people from multiple caucuses. There may be people in this caucus today with an interest in integrating into these other caucuses. Staff will try to help “connect the dots” and avoid duplication of efforts. We will also have a technology element included for discussion in all the RMS topics.

Q: Where are the deliverables for this Caucus going to live in the 2013 CWP document?

A: That will depend on what the content we produce looks like. This discussion will happen in part during our Charter talk. We will be able to pull content from our deliverable into the Update 2013 objectives, recommendations, and actions. Each of the RMS chapters could also be informed by the Technology Caucus. The Water Plan's analytical road-map could also benefit. In the spirit of the CWP, it will be integrated.

Comment: I would like to highlight A.B. 359 regarding Groundwater recharge mapping. Every member of this Caucus should take a look.



Water Technology Caucus Meeting

Q: A flexible framework of data standards is needed to improve communications from an efficiency standpoint. Where will data efficiency be a part of this?

A: We have specific objectives in the Update 2009 on this issue. We can do better on exchanging data and making it available. One of these is the Water P.I.E. (procurement information exchange). I would hope that this caucus could help inform this going forward. This takes a web-service approach. A data dictionary and data standards are the crux of this.

Comment: For 5 years the National Groundwater Monitoring Network Website has been using practices we could model. This could be a resource.

Q: I may be bringing up an unmentionable word, but what about money?

A: Money cannot constrain our thinking related to what should be looked at broadly since funds may be available from non-traditional sources or we may be incenting investment rather than spending money.

This is a living document. We will guide our work considering the research that needs to be done. It is broad based in scope. We would be remiss if we didn't take stock of what should and needs be done.

This is a guidance document. There is an important role for this group in identifying potential funding sources. We can work closely with CCST on this. We also have to consider angel capital and venture capital as important potential sources. Money IS an important issue, but should not constrain our thinking. Take a look at the Water Finance Caucus - they take a "multiple scenarios" view of this issue. We may have opportunities to work closely with them.

Q: Are we talking about money for this Caucus, or money for pilot studies?

A: Pilot studies and other work.

Q: What is the vision for the scope of work for this Water Technology Caucus?

A: We are going to discuss that next when we review the Caucus Charter.

Draft Work Plan and Caucus Charter:

Lisa Beutler informed potential caucus members the Water Technology Caucus is a "deliberative body" that will, over time, produce a "deliberative product". The language of the Water Technology Caucus Group Charter (handout) is a part of this. Related to this, she stated that the Water Plan is looking to confirm and stabilize membership, but that these are public meetings so attendance was still open to non-members. Ms. Beutler gave a quick review of the Water Plan Standing Charter Language:

- The Caucus is an extension of the CWP Public Advisory Committee
- Official membership will be established.
- Participants are expected to act as a liaison to their respective organizations.



Water Technology Caucus Meeting

- Participants are expected to contribute data and clarify issues.
- The CWP Public Advisory Committee will be receiving input from this group (Bob Wilkinson and Karl Longley will serve in this capacity)
- Other Water Plan groups (such as the Tribal Advisory Committee & State Agency Steering Committee or other Caucus groups) will receive input as requested.
- A regular schedule will be kept for this group, there will be online postings, and meeting minutes will be kept.
- Decision making will be consensus seeking.

(Note: for full text of the Charter see the meeting materials.)

Kamyar reviewed the Water Technology Caucus Group Charter document with the meeting participants. He emphasized that the CWP updated 2009 work is foundational to everything in the document, and that this Caucus has a statewide reach. The summarized points:

- The Water Technology caucus currently has nine deliverables laid out. They are numbered 1 – 9 only for identification -- they are not prioritized or necessarily chronological.
- Deliverables 1 – 3 are inventories.
- Deliverable 4 is about emerging technologies
- Deliverable 7 will inform the CWP's Sustainability Indicators.

Q: Does deliverable number 7 intersect with deliverable number 4?

A: This is to assess the effectiveness of technologies and their effects on the system.

Q: Does this include the new Water Quality legislation?

A: Yes.

Water Technology Institutions and Initiatives – Group Discussion:

Co-Leads Bob Wilkinson, David Zoldoske, and Karl Longley led a discussion on existing water technology institutions and initiatives. Mr. Zoldoske suggested that discussion should begin with finding a common definition on the term “Water Technology”. The summarized discussion points:

What is Water Technology?

- Appropriate Technology – for example, Constructed wetlands
- Linking systems together (patentable)
- New and innovative approaches (sometimes these are borrowed from outside our field)
- Not always hardware – could be management practices/techniques
- Genetic engineering
- Process/management/hardware- software
- Technology can be something to quantifiably measure
- Anything that could make an action more cost effective or resource efficient
- Use of space technology – remote sensing



Water Technology Caucus Meeting

How should we organize Water Technology?

- Informational/Forecasting
- Physical/Structural
- Biological
- Procedural (This includes social research, cultural context, public acceptance, and communications)

What types of objectives are we looking for?

- Extend existing water supplies
- Flood Risk
- Water Quality
- Productivity
- Environmental Stewardship
- Reduction/Efficiency
- Energy use
- Drought Management

Where do we find the Water nexus with Technology?

- Understanding systems
- Management techniques
- Water Quality, Treatment
- Maintenance
- Social Research
- Sustainability

The discussion also highlighted special areas of attention for all water technology issues.

- Where does technology allow us to make gains on our objectives, and where are the potential conflicts?
- Who is the end user of each type of technology?
- What is the potential for commercialization of emerging ideas?
- Remote sensing and other data collection methods
- Agriculture as an important driver of water technology

Lisa Beutler led the group in mind-map exercises during the discussion to help organize the discussion and encourage branching out of thoughts. These are attached to this meeting summary. Questions and answers about the deliverables also came up during the group discussion period:

Q: Regarding deliverable six, how do you envision that connection happening between our caucuses and Subject matter experts?



Water Technology Caucus Meeting

A: We have here today Hoa Ly. Her team networks with the RMS subject matter experts. We also have set up tools like “Survey Monkeys” and have started on that integration into this space. We have done this before in CWP Update 2009.

Q: Is this restricted to California? My group sees a lot of opportunities for collaboration with Australia. Is this open to the scope of this group’s deliverables?

A: We can go broader than just California.

Q: What about constraints and barriers identified?

A: I see this as a part of deliverable nine.

Q: What constitutes a water technology initiative?

A: That is an open question.

The group discussion was closed and the floor was given to Susan Hackwood of the CCST. She gave a presentation on the CCST, and its potential for integration with the CWP Water Technology Caucus. Susan explained that the CCST, while created by California legislation, was not a state agency. It is a network that interfaces with the most advanced scientific and technological communities. The goal of CCST is to look at innovation capacity, and will get involved in any complex issue that faces the state of California. This year, the CCST took a look at California’s energy future. The work of CCST can serve as an “eye-opener” for policy makers and the public. Susan emphasized that her organization can serve as a conduit for interaction with leading researchers and scientists, and can be an invaluable networking opportunity.

Next Steps:

Co – Lead Karl Longley stated that it was his hope that the Water Technology element could be a part of future water plans. As part of his hope for the continuing CWP process, he proposed two actions:

1. Visioning – Really take a look at the big issues and how they are anticipated to change over time. Then, actively encourage innovation to take them on.
2. A deep dive into the CWP Resource Management Strategies.

Kamyar explained that a key goal of this group was to put together an inventory of institutions. This could be informed by existing lists, or it could be a development effort.

Q: What are you looking for in this list?

A: Ultimately, it should contain all efforts, research, and initiatives out there.

Q: What does the final product look like?

A: A database

Q: Do we need a definition distinguishing “using” versus “developing” technology?

A: I think our focus should be on developing new generations of technology.



Water Technology Caucus Meeting

Participants were also offered an opportunity to offer any last thoughts. Much optimism for the potential of the group was expressed.

As is the practice for Water Plan sessions, the meeting was **Adjourned** at the scheduled time.

Attendance:

Note: (W) = Attended via Web

Group Co-Leads

1. Karl Longley, California Water Institute, CSU Fresno
2. David Zoldoske, CSU Fresno
3. Robert Wilkinson (W), UC Santa Barbara
4. Kamyar Guivetchi, DWR

Participants

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| 5. Alan Arroyo (W), DWR | 20. Dane Mathis (W), DWR |
| 6. Shakoor Azimi-Gayon, State Water Resources Control Board | 21. Lew Moeller, DWR |
| 7. Lauren Bauer (W), Kern County Water Agency | 22. Brian Moniz (W), DWR |
| 8. Tito Cervantes (W), DWR | 23. Arlan Nickel, U.S. Bureau of Reclamation |
| 9. Wei Chu (W), UC Irvine | 24. Tim Parker, GRA |
| 10. Sona Chilingaryan (W), EPA | 25. Elizabeth Patterson (W), City of Benicia |
| 11. Mike Dentenger, USGS | 26. Frank Ramirez, The Americas Group |
| 12. Mary Fahey (W), USDA | 27. Amy Rider (W), KEMA |
| 13. Erin Field Huston (W), Irrigation Association | 28. Samuel Sandoval Solis, UC Davis |
| 14. Susan Hackwood, California Council on Science and Technology | 29. Tito Sasaki, SCFB/NBAA |
| 15. Pal Hegedus, FMA | 30. Al Schiff, CPUC |
| 16. David Jaber (W), InNative | 31. Soroosh Sorooshian (W), UC Irvine |
| 17. Rich Juricich, DWR | 32. Edward Spang, UC Davis |
| 18. Hoa Ly, DWR | 33. Judie Talbot (W), CCP |
| 19. Charlie Kennel (W), UC San Diego | 34. Ali Tashavi, RMC - WRIME |
| | 35. Nigel Quinn (W), Lawrence Berkeley National Laboratory |
| | 36. Matt Zidar, GEI Consultants |

Meeting Staff (MWH)

37. Lisa Beutler, Executive Facilitator
38. Joshua Biggs, Note Taker